



SEN 10/081,439

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kie Y. Ahn et al.

Examiner:

Serial No.: 10/081,439

Group Art Unit: 2818

Filed: February 20, 2002

Docket: 1303.046US1

Title: EVAPORATED LaAlO₃ FILMS FOR GATE DIELECTRICS

#2 IDS

M. Brunson

9/27/02

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement. However, if an Office Action on the merits has been mailed, the Commissioner is hereby authorized to charge the required fees to Account No. 19-0743 in order to have this Information Disclosure Statement considered.

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

KIE Y. AHN ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 371-2157

Date 10 SEPTEMBER 2002

By

David R. Cochran
David R. Cochran
Reg. No. 46,632

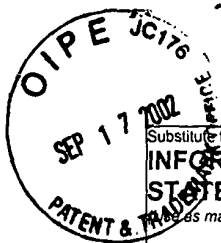
CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 11th day of September, 2002.

Name

Mark J. Gambetta

Signature

Mark J. Gambetta



Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

PTO/SB/08A(10-01)
Approved for use through 10/31/2002. OMB 851-0031
US Patent & Trademark Office U.S. DEPARTMENT OF COMMERCE

Complete if Known

Application Number	10/081439
Filing Date	February 20, 2002
First Named Inventor	Ahn, Kie
Group Art Unit	2818
Examiner Name	Unknown

Sheet 1 of 1

Attorney Docket No: 01303.046US1

US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T ²
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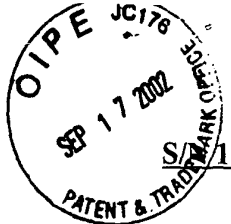
OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		GELLER, S., et al., "Crystallographic Studies of Perovskite-like Compounds. II. Rare Earth Aluminates", <u>Acta Cryst.</u> Vol. 9, (1956), pp. 1019-1025	
		GIESS, E.A., et al., "Lanthanide gallate perovskite-type substrates for epitaxial, high-T _c superconducting Ba ₂ YCu ₃ O _{7-δ} films", <u>IBM J. Res. Develop.</u> Vol. 34, No. 6, (November 6, 1990), pp. 916-926	
		LEE, A.E., et al., "Epitaxially grown sputtered LaAlO ₃ films", <u>Appl. Phys. Lett.</u> 57 (19), (November 5, 1990), pp. 2019-2021	
		LEE, L.P., et al., "Monolithic 77 K dc SQUID magnetometer", <u>Appl. Phys. Lett.</u> 59 (23), (December 2, 1991), pp. 3051-3053	
		MOLODYK, A. A., et al., "Volatile Surfactant-Assisted MOCVD: Application to LaAlO ₃ Thin Film Growth", <u>Chem. Vap. Deposition</u> Vol. 6, No. 3, (2000), pp. 133-138	
		PARK, BYUNG-EUN, et al., "Electrical properties of LaAlO ₃ /Si and Sr _{0.8} Bi _{2.2} Ta ₂ O ₉ /LaAlO ₃ /Si structures", <u>Applied Physics Letters</u> , Vol. 79, No. 6, (August 6, 2001), pp. 806-808	
		TAKEMOTO, J.H., et al., "Microstrip Resonators and Filters Using High-TC Superconducting Thin Films on LaAlO ₃ ", <u>IEEE Transaction on Magnetics</u> , Vol. 27, No. 2, (March, 1991), pp. 2549-2552	
		WILK, G.D., et al., "High-κ gate dielectrics: Current status and materials properties considerations", <u>J. Appl. Phys.</u> , Vol. 89, No. 10, (May 15, 2001), pp. 5243-5275	

EXAMINER**DATE CONSIDERED**

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional) ² Applicant is to place a check mark here if English language Translation is attached



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Title: EVAPORATED LaAlO_3 FILMS FOR GATE DIELECTRICS

COMMUNICATION CONCERNING CO-PENDING APPLICATIONS

Commissioner for Patents

Washington, D.C. 20231

Applicant would like to bring to the Examiner's attention the following related co-pending applications in the above-identified patent application:

<u>Serial No.</u>	<u>Filing Date</u>	<u>Attorney Docket</u>	<u>Title</u>
09/779,959	02/09/2001	N/A	A METHOD AND APPARATUS FOR FABRICATION OF HIGHLY RELIABLE 1-nm TiO_2 GATE INSULATOR
09/838,335	04/20/2001	N/A	A METHOD FOR HIGHLY RELIABLE AMORPHOUS HIGH-K GATE OXIDE HfO_2
09/881,408	06/13/2001	N/A	HIGHLY RELIABLE STACKED AMORPHOUS GATE OXIDES ($\text{HfO}_2/\text{La}_2\text{O}_3$)
09/908,767	07/18/2001	N/A	HIGH-INTEGRITY TiO_2 GATE INSULATOR, A METHOD AND APPARATUS FOR FABRICATION OF VERY UNIFORM THICKNESS ON 300mm WAFERS
09/944,981	8/30/2001	1303.021US1	CRYSTALLINE OR AMORPHOUS MEDIUM-K GATE OXIDES, Y_2O_3 AND Gd_2O_3
09/945,535	08/30/2001	1303.026US1	HIGHLY RELIABLE AMORPHOUS HIGH-K GATE OXIDE, ZrO_2
10/027,315	12/20/2001	1303.033US1	LOW-TEMPERATURE GROWN HIGH-QUALITY ULTRA-THIN PRASEODYMIUM GATE DIELECTRICS

COMMUNICATION CONCERNING CO-PENDING APPLICATIONS

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Dkt: 1303.046US1

10/028,643	12/20/2001	1303.030US1	LOW-TEMPERATURE GROWN HIGH QUALITY ULTRA-THIN CoTiO_3 GATE DIELECTRICS
10/052,983	01/17/2002	1303.031US1	HIGHLY RELIABLE AMORPHOUS HIGH-K GATE OXINITRIDE ZrO_xN_y
10/099,194	03/13/2002	N/A	EVAPORATION OF Y-Si-O FILMS FOR MEDIUM-K DIELECTRICS

Respectfully submitted,

KIE Y. AHN ET AL.

By Applicant's Representatives,


SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

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Date 10 SEPTEMBER 2002 By


David R. Cochran

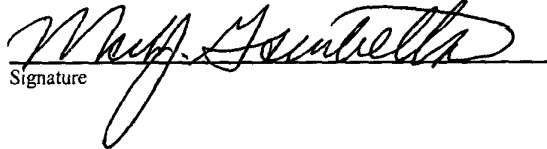
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Name

Mark J. Gambetta

Signature





2818

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Examiner: Group Art Unit: 2818

Commissioner for Patents
Washington, D.C. 20231

We are transmitting herewith the following attached items (as indicated with an "X"):

- ☒ A return postcard.
- ☒ An Information Disclosure Statement (1 pg.), Form 1449 (1 pg.), and copies of 8 cited references.
- ☒ Communication Concerning Co-Pending Applications (2 pgs.).

Please consider this a **PETITION FOR EXTENSION OF TIME** for sufficient number of months to enter these papers and please charge any additional required fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
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By: David R. Cochran
Atty: David R. Cochran
Reg. No. 46,632

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Mark J. Gambetta
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(GENERAL)